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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------|------------------|
| 09/616,944  | 07/14/2000  | Kazuyo Saito         | 43890-427                | 6874             |
| 7590  | 10/24/2003  |                      |                          |                  |
| McDermott Will & Emery<br>600 13th Street NW<br>Washington, DC 20005-3096 |             |                      | EXAMINER<br>NGUYEN, HA T |                  |
|   |             |                      | ART UNIT<br>2812         | PAPER NUMBER     |

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/616,944

Applicant(s)

SAITO ET AL.

Examiner

Ha T. Nguyen

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-30 and 32-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-30 and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Notice to applicant***

1. Applicants' Amendment and Response to the Office Action mailed 4-21-3 and RCE filed 8-27-3 have been entered and made of record (Paper Nos. 10 and 13). Following is an Office Action responding to the request.

### ***Response to Amendment***

2. In view of arguments and the amendment to the claims, the rejections of claims under 35 U.S.C. 102 or 103, as stated in Paper No. 8, has been withdrawn.

Applicants are referred to the new ground of rejection given below.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 21- 23, 25-27, and 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawano et al. (JP 01090517 , hereinafter "Kawano").

Referring to Fig. 1, related text and example 4, Kawano discloses [Claims 21 and 34] a method of fabricating an electrolytic capacitor, comprising the steps of: (a) fabricating a positive electrode, a foil 2 ; (b) fabricating a negative electrode, foil 3;(c) forming a solid organic conductive material on the surface of said positive electrode; and (d) impregnating an electrolyte between said positive electrode having said solid organic conductive material and said negative electrode; wherein said electrolyte comprises a liquid electrolyte; [Claim 22 ] wherein said solid

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organic conductive material is at least one of organic semiconductor and conductive polymer; [Claim 23 ] wherein a solution containing a polymerizable monomer is bonded to the surface of said positive electrode, and said bonded monomer is polymerized to form said solid organic conductive material; [Claims 25 and 32 ] wherein a solution containing at least one monomer of pyrrole, thiophene, or aniline is applied on the surface of said positive electrode, and said applied monomer is polymerized to form said solid organic conductive material; [Claim 26 ] wherein a solution containing a polymerizable monomer is applied on the surface of said positive electrode, and said applied monomer is chemically polymerized in liquid phase to form said solid organic conductive material; [Claim 27] wherein said polymerizable monomer is brought into contact with the surface of said positive electrode in a vapor-phase atmosphere of said polymerizable monomer, and polymerized in vapor phase to form said solid organic conductive material; [Claim 28] wherein said positive electrode is immersed in a liquid having a polymerizable monomer, said monomer is electrolytically polymerized to form said solid organic conductive material on the surface of said positive electrode; (See Example 4 and par. bridging pages 2 and 3 of the translated paper). The examiner interpreted that when the element was dipped in the solutions of persulfate and pyrrole, solid organic conductive material is formed on the electrodes surfaces as well as the separator surface, this portion of the electrolyte is equivalent to the claimed solid organic conductive material on the positive electrode, after the drying step, the element is again dipped in a solution of electrolyte, which is a liquid.

[Claim 33] Kawano also discloses disposing a separator 1 between said positive electrode and said negative electrode (see Constitution).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano, as applied above, in view of Kobayashi et al. ( U.S. Patent 5972052, hereinafter "Kobayashi").

Kawano discloses substantially the limitations of claims 29 and 30, as shown above. It also discloses wherein at said step (c), said solid organic conductive material of at least one of organic semiconductor and conductive polymer is formed, then said positive electrode having said solid organic conductive material is immersed in a soluble polymer solution (See Example 4 and par. bridging pages 2 and 3 of the translated paper).

But it does not disclose expressly [Claim 29] dried so that a residual dry polymer of said soluble polymer solution is formed on the surface of said solid organic conductive material; [Claim 30 ] wherein said solid organic conductive material is in a state swollen in an electrolyte. However, the missing limitations are well known in the art because Kobayashi discloses these features (See col. 3, lines 37-52, col. 5, lines 12-23 and paragraph bridging cols 6 and 7).

A person of ordinary skill is motivated to modify Kawano with Kobayashi to use a conventional material for the same purpose .

Therefore, it would have been obvious to combine Kawano with Kobayashi to obtain the invention as specified in claims 29 and 30.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano, as applied above, in view of Yoshimura et al. ( U.S. Patent 4864472, hereinafter " Yoshimura ").

Kawano discloses substantially the limitations of claim 24, as shown above.


But it does not disclose expressly wherein said solid organic conductive material has at least one organic semiconductor of 7,7,8,8-tetracyanoquinodimethane complex and its derivatives.

However, the missing limitation is well known in the art because Yoshimura discloses this feature (See col. 2, lines 17-39).

A person of ordinary skill is motivated to modify Kawano with Yoshimura to use a conventional material for the same purpose .

Therefore, it would have been obvious to combine Kawano with Yoshimura to obtain the invention as specified in claim 24.

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Therefore, it would have been obvious to combine Kawano with Yoshimura to obtain the invention as specified in claims 24 and 31. 

***Conclusion***

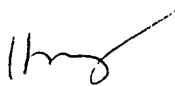
8. The prior art relevant to the disclosure of this application and not being used in the rejections.

US Patents 6473293 to Shimada et al., 6413282 to Tanahashi et al. and JP 05013286 to Komatsu et al. for teaching the formation of polymeric electrolyte between two electrodes.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha Nguyen whose telephone number is (703)308-2706 . The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week. The phone number for Wednesday is (703) 560-0528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (703) 308-3325. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Ha Nguyen

Primary Examiner

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